

WHAT IS CLAIMED IS:

1. An image processor comprising:

a first decision controller which decides whether input color data of a target pixel exist in first ranges;

5 a second decision controller which decides whether differences between color data of the target pixel and those of pixels adjacent thereto exist in second ranges different from the first ranges; and

a color decision controller which decides that the 10 target pixel has a specified color when the first decision controller decides that the color data of the target pixel exist in the first ranges and the second decision controller decides that the differences exist in the second ranges.

2. The image processor according to claim 1, wherein 15 said second decision controller determines a maximum value among differences of color data between the target pixel and the adjacent pixels thereof and decides whether the maximum value exists in the second ranges.

3. The image processor according to claim 1, further 20 comprising an edge detector which calculates differences in a plurality of color component data of the color data between the target pixel and the adjacent pixels thereof in a direction and decides a position of an edge based on the differences.

25 4. The image processor according to claim 1, further

comprising:

an extraction controller which extracts an element having a predetermined shape based on the decision by said color decision controller; and

5 a pattern detector which detects a specified pattern in the image data by discriminating whether the elements extracted by said extraction controller have a predetermined relationship between them.

5. 10 A method of image processing comprising the steps of:

deciding whether input color data of a target pixel exist in first ranges;

deciding whether differences between color data of the target pixel and those of pixels adjacent thereto exist 15 in second ranges different from the first ranges; and

deciding that the target pixel has a specified color when the color data of the target pixel is decided to exist in the first ranges and the differences are decided to exist in the second ranges.

20 6. The method according to claim 5, wherein a maximum value among differences of color data between the target pixel and the adjacent pixels thereof are obtained and it is decided whether the maximum value exists in the second ranges.

25 7. The method according to claim 5, further

comprising the steps of:

extracting an element having a predetermined shape based on the decision that the target pixel has a specified color; and

5 detecting a specified pattern in the image data by discriminating whether the extracted elements have a predetermined relationship between them.

8. A recording medium to be executed by a computer storing a program comprising the steps of:

10 deciding whether input color data of a target pixel exist in first ranges;

 deciding whether differences between color data of the target pixel and those of pixels adjacent thereto exist in second ranges different from the first ranges; and

15 deciding that the target pixel has a specified color when the color data of the target pixel is decided to exist in the first ranges and the differences are decided to exist in the second ranges.

9. The recording medium according to claim 8, wherein 20 a maximum value among differences of color data between the target pixel and the adjacent pixels thereof are obtained and it is decided whether the maximum value exists in the second ranges.

10. The recording medium according to claim 8, the 25 program further comprising the steps of:

extracting an element having a predetermined shape based on the decision that the target pixel has a specified color; and

detecting a specified pattern in the image data by
5 discriminating whether the extracted elements have a predetermined relationship between them.

11. An image processor comprising:

a first decision controller which decides whether input color data of a target pixel exist in first ranges;

10 a second decision controller which performs calculation on the input color data of the target pixel and decides whether results of the calculation exist in second ranges different from the first ranges; and

15 a color decision controller which decides that the target pixel has a specified color when the first decision controller decides that the color data of the target pixel exist in the first ranges and the second decision controller decides that the results exist in the second ranges.

12. The image processor according to claim 11, wherein
20 the color data includes a plurality of color component data and said second decision controller calculates differences between the color component data of the target pixel and decides whether the differences exist in the second ranges.

13. The image processor according to claim 11, further
25 comprising:

an extraction controller which extracts an element having a predetermined shape based on the decision by said decision controller; and

5 a pattern detector which detects a specified pattern in the image data by discriminating whether the elements extracted by said extraction controller have a predetermined relationship between them.

14. A method of image processing comprising the steps of:

10 deciding whether input color data of a target pixel exist in first ranges;

15 performing calculation on the input color data of the target pixel and decides whether results of the calculation exist in second ranges different from the first ranges; and

deciding that the target pixel has a specified color when the color data of the target pixel are decided to exist in the first ranges and the results are decided to exist in the second ranges.

20 15. The method according to claim 14, wherein the color data includes a plurality of color component data, differences between the color component data of the target pixel are obtained in the calculation on the input color data and it is decided whether the differences exist in the second ranges.

16. The method according to claim 14, further comprising the steps of:

extracting an element having a predetermined shape based on the decision that the target pixel has a specified color; and

detecting a specified pattern in the image data by discriminating whether the extracted elements have a predetermined relationship between them.

17. A recording medium to be executed by a computer storing a program comprising the steps of:

deciding whether input color data of a target pixel exist in first ranges;

performing calculation on the input color data of the target pixel and decides whether results of the calculation exist in second ranges different from the first ranges; and

deciding that the target pixel has a specified color when the color data of the target pixel are decided to exist in the first ranges and the results are decided to exist in the second ranges.

18. The method according to claim 17, wherein the color data includes a plurality of color component data, differences between the color component data of the target pixel are obtained in the calculation on the input color data and it is decided whether the differences exist in the

second ranges.

19. The method according to claim 17, the program further comprising the steps of:

extracting an element having a predetermined shape
5 based on the decision that the target pixel has a specified color; and

detecting a specified pattern in the image data by discriminating whether the extracted elements have a predetermined relationship between them.